

Key Facts about Influenza (Flu) & Flu Vaccine



What is influenza (also called flu)?
The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. The best way to prevent the flu is by getting a flu vaccine each year.

Symptoms of Flu

People who have the flu often feel some or all of these symptoms:

- fever* or feeling feverish/chills (*It's important to note that not everyone with flu will have a fever.)
- cough
- sore throat
- runny or stuffy nose
- muscle or body aches
- headaches
- fatigue (very tired)
- some people may have vomiting and diarrhea, though this is more common in children than adults

How Flu Spreads

Most experts believe that flu viruses spread mainly by droplets made when people with flu cough, sneeze, or talk. These droplets can land in the

mouths or noses of people who are nearby. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching their own mouth, eyes, or nose.

Period of Contagiousness

You may be able to pass on the flu to someone else before you know you are sick, as well as while you are sick. Most healthy adults may be able to infect others beginning 1 day before symptoms develop and up to 5-7 days after becoming sick. Some people, especially children and people with weakened immune systems, might be able to infect others for an even longer time.

How serious is the flu?

Flu is unpredictable and how severe it is can vary widely from one season to the next depending on many things, including:

- what flu viruses are spreading,
- how much flu vaccine is available,
- when vaccine is available,
- how many people get vaccinated, and
- how well the flu vaccine is matched to flu viruses that are causing illness.

Certain people are at greater risk for serious complications if they get the flu. This includes older people, young children, pregnant women and people with certain health conditions (such as asthma, diabetes, or heart disease).

Flu seasons are unpredictable and can be severe. Over a period of 30 years, between 1976 and 2006, estimates of flu-associated deaths range from a low of about 3,000 to a high of about 49,000 people.

During 2009-2010, a new and very different flu virus (called 2009 H1N1) spread worldwide causing the first flu pandemic in more than 40 years. It is estimated that the 2009 H1N1 pandemic resulted in more than 12,000 flu-related deaths in the U.S. In contrast to seasonal flu, nearly 90 percent of the

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deaths occurred among people younger than 65 years of age.

Complications of Flu

Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions such as congestive heart failure, asthma, or diabetes.

When to Get Vaccinated Against Seasonal Flu

Yearly flu vaccination should begin in September, or as soon as vaccine is available, and continue throughout the flu season which can last as late as May. This is because the timing and duration of flu seasons vary. While flu season can begin as early as October, most of the time seasonal flu activity peaks in January or later.

Who should get vaccinated?

On February 24, 2010 vaccine experts voted that everyone 6 months and older should get a flu vaccine each year starting with the 2010-2011 influenza season. CDC's Advisory Committee on Immunization Practices (ACIP) voted for "universal" flu vaccination in the U.S. to expand protection against the flu to more people. While everyone should get a flu vaccine each flu season, it's especially important that certain people get vaccinated either because they are at high risk of having serious flu-related complications or because they live with or care for people at high risk for developing flu-related complications.

Who is at high risk for developing flu-related complications?

- Children younger than 5, but especially children younger than 2 years old
- Adults 65 years of age and older
- Pregnant women
- Also, last flu season, American Indians and Alaskan Natives seemed to be at higher risk of flu complications

People who have medical conditions including:

- Asthma (even if it's controlled or mild)
- Neurological and neurodevelopmental conditions [including disorders of the brain, spinal cord, peripheral nerve, and muscle such as cerebral palsy, epilepsy (seizure disorders), stroke, intellectual disability (mental retardation),

- moderate to severe developmental delay, muscular dystrophy, or spinal cord injury]
- Chronic lung disease (such as chronic obstructive pulmonary disease [COPD] and cystic fibrosis)
- Heart disease (such as congenital heart disease, congestive heart failure, and coronary artery disease)
- Blood disorders (such as sickle cell disease)
- Endocrine disorders (such as diabetes mellitus)
- Kidney disorders
- Liver disorders
- Metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders)
- Weakened immune system due to disease or medication (such as people with HIV or AIDS, cancer, or those on chronic steroids)
- People younger than 19 years of age who are receiving long-term aspirin therapy
- People who are morbidly obese (Body Mass Index [BMI] of 40 or greater)

Who else should get vaccinated?

Other people for whom vaccination is especially important are:

- People who live in nursing homes and other long-term care facilities
- People who live with or care for those at high risk for complications from flu, including:
 - Health care workers
 - Household contacts of persons at high risk for complications from the flu
 - Household contacts and caregivers of children younger than 5 years of age with particular emphasis on vaccinating contacts of children younger than 6 months of age (children younger than 6 months are at highest risk of flu-related complications but are too young to get vaccinated)

Who should not be vaccinated against seasonal flu?

Some people should not be vaccinated without first consulting a physician. They include:

- People who have a severe allergy to chicken eggs
- People who have had a severe reaction to an

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influenza vaccination in the past

- People who developed Guillian-Barré syndrome (GBS) within 6 weeks of getting an influenza vaccine previously
- Children younger than 6 months of age (influenza vaccine is not approved for use in this age group)
- People who have a moderate or severe illness with a fever should wait to get vaccinated until their symptoms lessen
- If you have questions about whether you should get a flu vaccine, consult your health care provider

Source: CDC



Questions & Answers

2010-2011 Flu Season

What sort of flu season is expected this year?

Flu seasons are unpredictable in a number of ways. Although epidemics of flu happen every year, the timing, severity, and length of the epidemic depends on many factors, including what influenza viruses are spreading and whether they match the viruses in the vaccine.

Will new strains of flu circulate this season?

Flu viruses are constantly changing so it's not unusual

for new flu virus strains to appear each year. While not certain, it is likely that 2009 H1N1 viruses and seasonal viruses will cause illness in the U.S. during the 2010-2011 flu season.

When will flu activity begin and when will it peak?

The timing of flu is very unpredictable and can vary from season to season. Flu activity most commonly peaks in the U.S. in January or February. However, seasonal flu activity can occur as late as May.

What should I do to prepare for this flu season?

CDC recommends a yearly flu vaccine for everyone as the first and most important step in protecting against this serious disease. While there are many different flu viruses, the flu vaccine is designed to protect against the three main flu strains that research indicates will cause the most illness during the flu season. The 2010-2011 flu vaccine will protect against three different flu viruses: an H3N2 virus, an influenza B virus and the H1N1 virus that caused so much illness last season. Getting the flu vaccine soon after it becomes available each year is always a good idea, and the protection you get from vaccination will last throughout the flu season.

In addition, you can take everyday preventive steps like staying away from sick people and washing your hands to reduce the spread of germs. If you are sick with flu, stay home from work or school to prevent spreading influenza to others.

How effective is the flu vaccine?

The effectiveness of the vaccine can vary and depends in part on the match between the viruses in the vaccine and flu viruses that are circulating in the community. If these are closely matched, vaccine effectiveness (VE) is higher. If they are not closely matched, VE can be reduced. During well-matched years, clinical trials have shown VE between 70% and 90% among healthy adults.

Will this season's vaccine be a good match for circulating viruses?

It's not possible to predict with certainty which flu viruses will predominate during a given season. Flu viruses are constantly changing (called drift) - they can change from one season to the next or they can even change within the course of one flu season. Experts must pick which viruses to include in the

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vaccine many months in advance in order for vaccine to be produced and delivered on time. Because of these factors, there is always the possibility of a less than optimal match between circulating viruses and the viruses in the vaccine.

How do we know if there is a good match between the vaccine viruses and those causing illness?

Over the course of a flu season CDC studies samples of flu viruses circulating during that season to evaluate how close a match there is between viruses in the vaccine and circulating viruses. In addition, CDC conducts vaccine effectiveness studies to determine how well the vaccine protects against illness. However, it's important to remember that even during seasons when the vaccine is not optimally matched to predominant circulating viruses, CDC and other experts continue to recommend flu vaccine as the best way to protect against the flu.

Can the vaccine provide protection even if the vaccine is not a "good" match?

Yes, antibodies made in response to vaccination with one strain of flu viruses can provide protection against different, but related strains. A less than ideal match may result in reduced vaccine effectiveness against the variant viruses, but it can still provide some protection against influenza illness. In addition, it's important to remember that the flu vaccine contains three virus strains so that even when there is a less than ideal match or lower effectiveness against one strain, the vaccine may protect against the other two viruses. For these reasons, even during seasons when there is a less than ideal match, CDC continues to recommend flu vaccination. This is particularly important for people at high risk for serious flu complications, and their close contacts.

In what years was there a good match between the vaccine and the circulating viruses?

In recent years the match between the vaccine viruses and those identified during the flu season has usually been good. In 16 of the last 20 U.S. influenza seasons the viruses in the influenza vaccine have been well matched to the predominant circulating viruses. Since 1990, there has only been one season (1997-98) when there was very low cross-reaction between the viruses in the vaccine and the

predominate circulating virus, and three seasons (1992-93, 2003-04, and 2007-08) when there was low cross-reaction. In response to the emergence of the 2009 H1N1 virus last season (2009-2010), a new flu vaccine was developed which was a good match to the new virus.

What is CDC doing to monitor vaccine effectiveness for the 2010-2011 season?

CDC carries out and collaborates with other partners within and outside CDC to assess the effectiveness of flu vaccines. During the 2010-2011 season, CDC is planning multiple studies on the effectiveness of influenza vaccine. These studies will measure vaccine effectiveness in preventing laboratory confirmed influenza in older people and in children.

Is there treatment for the flu?

Yes. If you get sick, there are drugs that can treat flu illness. They are called antiviral drugs and they can make your illness milder and make you feel better faster. For more information about antiviral drugs, visit

<http://www.cdc.gov/flu/antivirals/index.htm>.

What is antiviral resistance?

Antiviral resistance means that a virus has changed in such a way that the antiviral drug is less effective in treating or preventing illness. Samples of viruses collected from around the United States and worldwide are studied to determine if they are resistant to any of the four FDA-approved influenza antiviral drugs.

What is CDC doing to monitor antiviral resistance in the United States during the 2010-11 season?

CDC routinely collects viruses through a domestic and global surveillance system to monitor for changes in influenza viruses. CDC will continue ongoing surveillance and testing of influenza viruses. Additionally, CDC is working with the state public health departments and the World Health Organization to collect additional information on antiviral resistance in the United States and worldwide. The information collected will assist in making informed public health policy recommendations.

Source: CDC



Avoid touching your eyes, nose, or mouth.

Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.

Practice other good health habits.

Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

Source: CDC

Preventing the Flu: Good Health Habits Can Help Stop Germs

The single best way to prevent seasonal flu is to get vaccinated each year, but good health habits like covering your cough and washing your hands often can help stop the spread of germs and prevent respiratory illnesses like the flu. There also are flu antiviral drugs that can be used to treat and prevent the flu.

Avoid close contact.

Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too.

Stay home when you are sick.

If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.

Cover your mouth and nose.

Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.

Clean your hands.

Washing your hands often will help protect you from germs. If soap and water are not available, use an alcohol-based hand rub.